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FILE 'AGRICOLA' ENTERED AT 17:10:02 ON 04 FEB 2004

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=> s semi(w)continuous and plant and suspension and cell  
L1 35 SEMI(W) CONTINUOUS AND PLANT AND SUSPENSION AND CELL

=> s l1 and rice  
L2 3 L1 AND RICE

=> d 12 1-3

AN 2001:283730 BIOSIS  
DN PREV200100283730  
TI A cyclical \*\*\*semi\*\*\* - \*\*\*continuous\*\*\* process for heterologous protein production using metabolically regulated \*\*\*plant\*\*\* \*\*\*cell\*\*\* \*\*\*suspension\*\*\* cultures.  
AU Trexler, Melody M. [Reprint author]; McDonald, Karen A. [Reprint author]; Jackman, Alan P. [Reprint author]  
CS Department of Chemical Engineering and Material Science, University of California, 1 Shields Ave, Davis, CA, 95616, USA  
trexler@ucdavis.edu  
SO Abstracts of Papers American Chemical Society, (2001) Vol. 221, No. 1-2, pp. BIOT 24. print.  
Meeting Info.: 221st National Meeting of the American Chemical Society.  
San Diego, California, USA. April 01-05, 2001. American Chemical Society.  
CODEN: ACSRAL. ISSN: 0065-7727.  
DT Conference; (Meeting)  
Conference; Abstract; (Meeting Abstract)  
LA English  
ED Entered STN: 13 Jun 2001  
Last Updated on STN: 19 Feb 2002

L2 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:391843 CAPLUS  
 DN 136:368537  
 TI Process for scaled-up production of recombinant proteins using transgenic  
     \*\*\*plant\*\*\*    \*\*\*suspension\*\*\* cultures  
 IN McDonald, Karen A.; Jackman, Alan P.; Trexler, Melody M.  
 PA Regents of the University of California, USA  
 SO PCT Int. Appl., 34 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002040633	A2	20020523	WO 2001-US43670	20011114
	WO 2002040633	A3	20030116		
				W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG	
	AU 2002025693	A5	20020527	AU 2002-25693	20011114
	US 2002120953	A1	20020829	US 2001-992845	20011114
PRAI	US 2000-248913P	P	20001114		
	WO 2001-US43670	W	20011114		

L2 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2001:197330 CAPLUS  
 TI A cyclical   \*\*\*semi\*\*\* - \*\*\*continuous\*\*\* process for heterologous  
     protein production using metabolically regulated   \*\*\*plant\*\*\*  
     \*\*\*cell\*\*\*    \*\*\*suspension\*\*\* cultures  
 AU Trexler, Melody M.; McDonald, Karen A.; Jackman, Alan P.  
 CS Department of Chemical Engineering and Material Science, University of  
     California, Davis, CA, 95616, USA  
 SO Abstracts of Papers - American Chemical Society (2001), 221st, BIOT-024  
 CODEN: ACSRAL; ISSN: 0065-7727  
 PB American Chemical Society  
 DT Journal; Meeting Abstract  
 LA English

=> s l1 and optimiz?  
 L3                2 L1 AND OPTIMIZ?

=> d l3 1-2

L3 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
 AN 2002:522627 BIOSIS  
 DN PREV200200522627  
 TI Optimisation of a bioreactor culture of the moss *Physcomitrella patens* for  
     mass production of protoplasts.  
 AU Hohe, Annette; Reski, Ralf [Reprint author]

CS Plant Biotechnology, Freiburg University, Sonnenstrasse 5, D-79104,  
Freiburg, Germany  
ralf.reski@biologie.uni-freiburg.de  
SO Plant Science (Shannon), (July, 2002) Vol. 163, No. 1, pp. 69-74. print.  
CODEN: PLSCE4. ISSN: 0168-9452.  
DT Article  
LA English  
ED Entered STN: 9 Oct 2002  
Last Updated on STN: 9 Oct 2002

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2002:547784 CAPLUS  
DN 137:291070  
TI Optimisation of a bioreactor culture of the moss *Physcomitrella patens* for  
mass production of protoplasts  
AU Hohe, Annette; Reski, Ralf  
CS Plant Biotechnology, Freiburg University, Freiburg, D-79104, Germany  
SO Plant Science (Shannon, Ireland) (2002), 163(1), 69-74  
CODEN: PLSCE4; ISSN: 0168-9452  
PB Elsevier Science Ireland Ltd.  
DT Journal  
LA English  
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s l1 and optimi?  
L4 2 L1 AND OPTIMI?

=> s l1 and problem  
L5 1 L1 AND PROBLEM

=> d 15 1

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN  
AN 2000:327243 CAPLUS  
TI Increased foreign protein production and recovery from \*\*\*plant\*\*\*  
\*\*\*cells\*\*\* cultured in an affinity chromatography bioreactor (ACBR).  
AU James, Eddie; Mills, David R.; Lee, James M.  
CS Chemical Engineering, Washington State University, Pullman, WA,  
99164-2710, USA  
SO Book of Abstracts, 219th ACS National Meeting, San Francisco, CA, March  
26-30, 2000 (2000), BIOT-023 Publisher: American Chemical Society,  
Washington, D. C.  
CODEN: 69CLAC  
DT Conference; Meeting Abstract  
LA English

=> d 15 1 ab

L5 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2004 ACS on STN  
AB Previous studies have shown that \*\*\*plant\*\*\* \*\*\*cell\*\*\* cultures  
can be employed for the prodn. of pharmaceutical proteins. There are  
several advantages to using \*\*\*plant\*\*\* \*\*\*cells\*\*\* for the prodn.  
of biol. active proteins. For example, \*\*\*plant\*\*\* \*\*\*cells\*\*\*  
are cultivated in simple, inexpensive media from which secreted proteins

may be easily purified. However, it is desirable to improve the prodn. level of proteins by \*\*\*plant\*\*\* \*\*\*cells\*\*\* . Furthermore, secreted proteins were found to be unstable in the growth media. One possible method of overcoming these \*\*\*problems\*\*\* is to collect and remove the product in a \*\*\*semi\*\*\* - \*\*\*continuous\*\*\* manner as it is produced. Such a prodn. scheme would mitigate the effects of protein instability and any product inhibition inherent to the system. In this work, an affinity chromatog. bioreactor (ACBR) was developed and used to continuously bind a foreign protein from \*\*\*suspension\*\*\* cultures of Nicotiana tabacum, genetically modified to produce the desired protein product. The ACBR reactor uses an affinity ligand specific to the desired product to collect the protein as it is produced. For initial studies, the heavy chain of a monoclonal antibody was produced and removed using a protein G matrix. Then, as a more general model, a 6-his tag was added to human granulocyte macrophage colony stimulating factor (GM-CSF). The 6-his tag, consisting of six histidine residues added to the protein terminus, binds strongly to metal ions such as nickel. This tag may be added to virtually any protein product, allowing removal by a nickel affinity matrix. Expts. were conducted to det. suitable parameters and procedures for operating the bioreactor. Product concns. in cultures growing in the ACBR were compared with those in normal batch cultures and to a control that was identical to the ACBR except that the column contained a matrix with no specificity. Results showed that levels of recoverable protein could be increased seven-fold as compared to previous batch studies.

=> s 11 and variation  
L6 2 L1 AND VARIATION

=> d 16 1-2 ibib ab

L6 ANSWER 1 OF 2 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved.  
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ACCESSION NUMBER: 93:66022 AGRICOLA  
DOCUMENT NUMBER: IND93042998  
TITLE: \*\*\*Variation\*\*\* of aggregate size in \*\*\*plant\*\*\*  
\*\*\*cell\*\*\* \*\*\*suspension\*\*\* batch and  
\*\*\*semi\*\*\* - \*\*\*continuous\*\*\* cultures.  
AUTHOR(S): Kieran, P.M.; Malone, D.M.; MacLoughlin, P.F.  
CORPORATE SOURCE: University College, Dublin, Ireland  
AVAILABILITY: DNAL (TP368.F64)  
SOURCE: Food and bioproducts processing : transactions of the  
Institution of Chemical Engineers, Part C, Mar 1993.  
Vol. 71, No. Cl. p. 40-46  
Publisher: Rugby [England] : The Institution.  
CODEN: FBPREO; ISSN: 0960-3085  
NOTE: Includes references.  
DOCUMENT TYPE: Article  
FILE SEGMENT: Non-U.S. Imprint other than FAO  
LANGUAGE: English

L6 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2004 ACS on STN  
ACCESSION NUMBER: 1994:189778 CAPLUS  
DOCUMENT NUMBER: 120:189778

TITLE:                    \*\*\*Variation\*\*\* of aggregate size in \*\*\*plant\*\*\*  
                  \*\*\*cell\*\*\*     \*\*\*suspension\*\*\* batch and  
                  \*\*\*semi\*\*\* - \*\*\*continuous\*\*\* cultures

AUTHOR(S):            Kieran, P. M.; Malone, D. M.; MacLoughlin, P. F.  
CORPORATE SOURCE:    Dep. Chem. Eng., Univ. Coll., Dublin, India  
SOURCE:                Food and Bioproducts Processing (1993), 71(C1), 40-6  
CODEN: FBPREO; ISSN: 0960-3085

DOCUMENT TYPE:        Journal  
LANGUAGE:              English

AB           \*\*\*Suspension\*\*\* cultures of *Morinda citrifolia* were grown under batch and semicontinuous conditions in shake flasks and a stirred-tank bioreactor (STR). In the STR, stirrer speeds of 200-500 rpm were investigated.   \*\*\*Cell\*\*\*   \*\*\*suspensions\*\*\* were monitored for \*\*\*variations\*\*\* in biomass concns.,   \*\*\*cell\*\*\* viability,   \*\*\*cell\*\*\* length, chain length, and no. of   \*\*\*cells\*\*\* per chain. An image anal. technique was used for the evaluation of morphol. properties. In batch culture, distinct phases of   \*\*\*cell\*\*\* and chain growth can be identified. During the early exponential growth phase predominant in the semicontinuous fermn., chain length increased with increasing stirrer speed until an upper limit was reached. Further increases in stirrer speed resulted in a redn. in av. chain length. There was no apparent redn. in   \*\*\*cell\*\*\* viability with increasing stirrer speed, although   \*\*\*variations\*\*\* in growth rates were obsd. Chain and   \*\*\*cell\*\*\* length distributions can be classified as lognormal over the course of both batch and   \*\*\*semi\*\*\* - \*\*\*continuous\*\*\* growth cycles.

=> s semi(w)continuous and plant and optimi?  
L7                  26 SEMI(W) CONTINUOUS AND PLANT AND OPTIMI?

=> duplicate remove 17  
DUPLICATE PREFERENCE IS 'AGRICOLA, BIOSIS, CAPLUS'  
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n  
PROCESSING COMPLETED FOR L7  
L8                  25 DUPLICATE REMOVE L7 (1 DUPLICATE REMOVED)

=> d 18 1-10 ti

L8                  ANSWER 1 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN  
TI                  Thermal coupling between crude distillation and delayed coking units

L8                  ANSWER 2 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN  
TI                  Field studies of mercury control using injected sorbents

L8                  ANSWER 3 OF 25 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
TI                  \*\*\*Optimising\*\*\* heavy metal adsorbance by dried seaweeds.

L8                  ANSWER 4 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN  
TI                  Scale-up for a process of supercritical extraction with adsorption of solute onto active carbon. Application to soil remediation

L8                  ANSWER 5 OF 25 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN  
DUPLICATE 1  
TI                  \*\*\*Optimisation\*\*\* of a bioreactor culture of the moss *Physcomitrella patens* for mass production of protoplasts.

L8 ANSWER 6 OF 25 AGRICOLA Compiled and distributed by the National Agricultural Library of the Department of Agriculture of the United States of America. It contains copyrighted materials. All rights reserved. (2004) on STN

TI Supercritical fluid extraction of *Lavandula stoechas* L. ssp. *cariensis* (Boiss.) Rozeira.

L8 ANSWER 7 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN

TI Steady state analysis of membrane processes for the treatment of industrial effluents

L8 ANSWER 8 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN

TI Molecular modification of egg proteins for functional improvement

L8 ANSWER 9 OF 25 CAPLUS COPYRIGHT 2004 ACS on STN

TI Microwave extraction of botanicals. A high tech green approach.

L8 ANSWER 10 OF 25 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

TI Microbial treatment of pulp and paper mill effluents containing lignin.

=> s 18 and secretion

L9 0 L8 AND SECRETION

=> d 18 10 ibib ab

L8 ANSWER 10 OF 25 BIOSIS COPYRIGHT 2004 BIOLOGICAL ABSTRACTS INC. on STN

ACCESSION NUMBER: 1998:277542 BIOSIS

DOCUMENT NUMBER: PREV199800277542

TITLE: Microbial treatment of pulp and paper mill effluents containing lignin.

AUTHOR(S): Choudhury, S.; Manthan, M.; Sahoo, N.; Rohella, R. S.  
[Reprint author]

CORPORATE SOURCE: Regional Res. Lab., Bhubaneswar 751 013, India

SOURCE: Indian Journal of Experimental Biology, (May, 1998) Vol. 36, No. 5, pp. 488-492. print.

CODEN: IJEBAA6. ISSN: 0019-5189.

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 24 Jun 1998

Last Updated on STN: 24 Jun 1998

AB Comparative studies on the native flora present in the pulp and paper mill effluent and three other inoculated lignolytic fungi namely *Pleurotus ostreatus* (MTCC-142), *Sporotrichum pulverulentum* (MTCC-163) and *Heterobasidion annosum* (MTCC-146) for their efficacy in the biodegradation of lignin has been presented. The results of the above studies indicated that the white rot fungus *P. ostreatus* is superior in performance to all other cultures and hence selected all further studies. Extensive bench scale studies to \*\*\*optimise\*\*\* all the process parameters for the best performance of above selected have been carried out and discussed. At the above \*\*\*optimised\*\*\* conditions of 30 days of incubation period, 1% cellulose, pH of the effluent adjusted to 4 and with no agitation, the above inoculated culture was able-to biodegrade 72.37% lignin with simultaneous reduction 74.39% and 54.11% of BOD and COD respectively. Further the treatment of raw effluents carried out by the mixed flora indicated that the native flora does not very much affect the overall performance of the inoculated culture and also the process.